



State of New Hampshire

Health Information Exchange Planning and Implementation Project

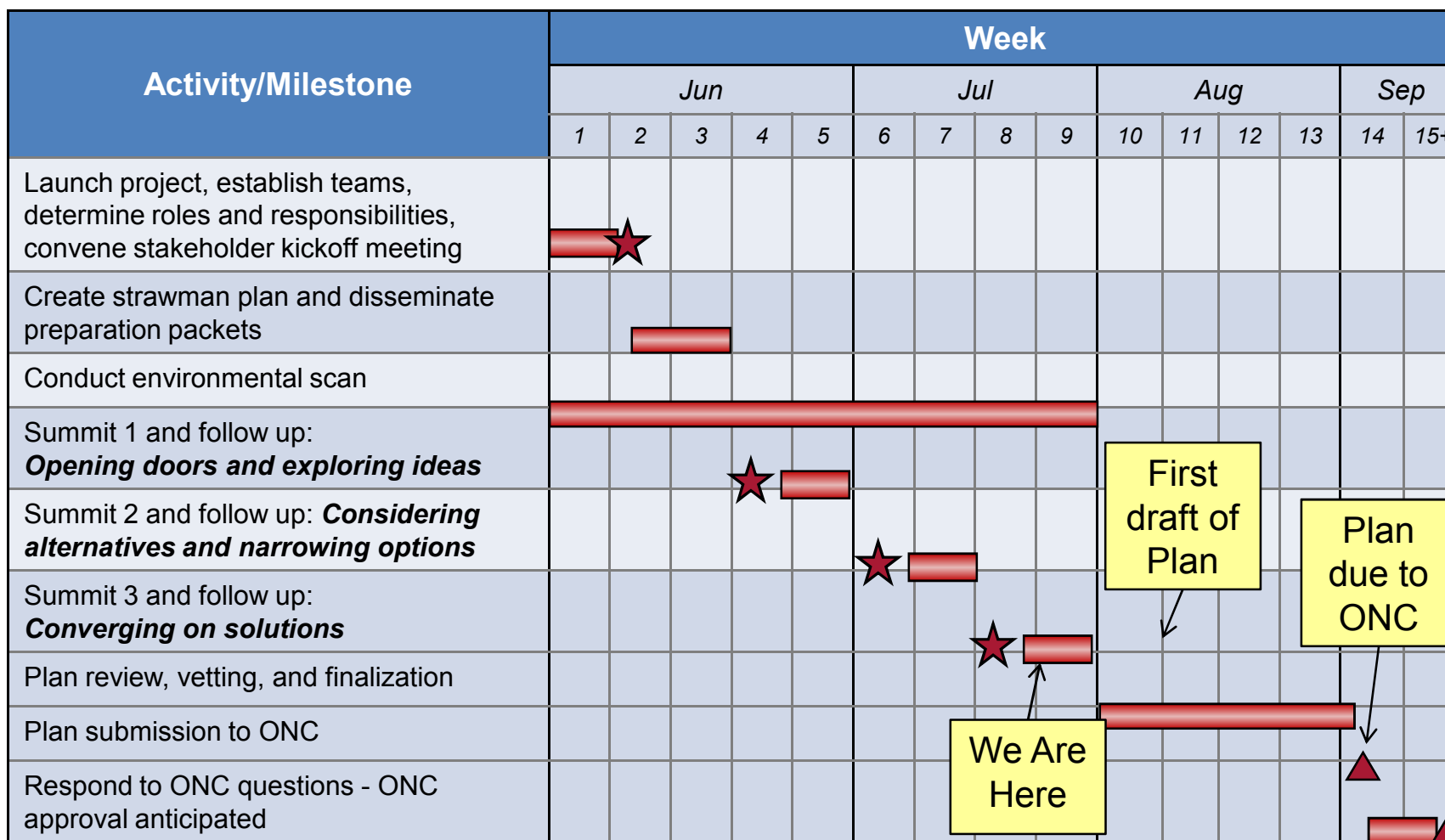
Phase 3 “Converging on Solutions”

Discussion document for Business and Technology Workgroup

July 26, 2010

# HIEPI - MAeHC Project Schedule

## Segment 1 Timeline: June 1 – October 31



## Objectives for today

- ☐ Review the unified approach emerging from the various working groups
- ☐ Identify gaps and concerns with strawman phasing
- ☐ Identify cross-domain gaps or dependencies not addressed in unified approach

## Our story so far...

- ❑ **Federal government is making available \$5.5M to motivate the creation of a floor of basic health information exchange across New Hampshire**
  - The goal is to enhance individual providers' ability to achieve Meaningful Use and must comprise at least three elements: prescribing, lab results delivery, care summary exchange
  - Focus must be on identifying gaps in availability of these transactions, and using federal program funds to fill such gaps
  - There is NO requirement to create infrastructure if such gaps can be filled by other means (for example, through strong governance and coordination of private efforts)
  
- ❑ **New Hampshire has three options available to it with respect to federal HIE funds:**
  - Establish infrastructure and organizational capability to meet the federal program requirements
  - Create a strong governance, coordination, monitoring, and enforcement model to orchestrate and perhaps subsidize individual private efforts
  - Turn down the federal funds
  
- ❑ **General consensus appears to be that New Hampshire should pursue federal funds and use such funds to:**
  - Lay an organizational and technical foundation for achievement of longer term statewide health information goals
  - Construct the organizational and technical foundation so that it can stand on its own, if necessary, but also be extensible for broader and deeper future functions, if desired

## The statewide HIE program must recognize existing features of the New Hampshire health care landscape...

- ❑ **There is a relatively high degree of health information exchange occurring in New Hampshire today**
  - All of it is within “enterprise HIE networks” established and managed by hospital systems, or through bilateral HIE relationships between hospital systems
  - There are currently no “collaborative HIE networks” operating in NH today, nor are there any collaborative HIE organizations
  
- ❑ **Within the hospital networks, the vast majority of exchange is occurring between hospitals and their employed ambulatory physician practices**
  - Since well over 50% of ambulatory physicians are employed by hospitals, this represents relatively high penetration of health exchange capabilities
  - Hospitals have also established health exchange capabilities with affiliated ambulatory physicians, though with lower penetration and for fewer types of transactions
  
- ❑ **The gaps that exist in the market today with respect to lab results delivery and summary care exchange capabilities are:**
  - Employed and affiliated physicians within hospital service areas who do not yet receive MU-level transactions through their hospital network
  - Ambulatory physicians outside of existing hospital networks for whom no plan exists today for health information exchange
  - Hospital-to-hospital exchange, which is mostly non-existent except for a very small number of bilateral exchanges between hospitals
  - Cross-state health exchange for all hospitals and physicians, for which no electronic exchange capabilities exist today

## ...as well as the current legal and policy environment

- ❑ **Current law places restrictions on the types of transactions that can be conducted by a collaborative HIE entity and places requirements on operational aspects of the entity**
  - Transactions through an HIE entity are only allowed for information sharing among providers for treatment purposes
    - Excluded transactions include reporting for public health, performance/measurement, MU-reporting to Medicaid & Medicare
  - Also requires patient opt-out for any transactions conducted by the HIE entity, and audit of all transactions including sender, receiver, and identification of patient
- ❑ **Public health reporting is statutorily required, however, the current law does not allow such transactions to be brokered by an HIE entity**
  - There are currently a wide variety of public health reporting requirements and systems
  - Forces ad hoc point-to-point electronic and non-electronic solutions between providers and DPH
- ❑ **Any proposed changes to NH law would be highly unlikely to be enacted before July 2011**
- ❑ **There is currently no State funding for HIE activities, and no expectation that such funds might become available in the near future**
  - Potential for some small amount of State funds to cover first year match requirement (~\$200K)

We began by gathering 52 possible use cases for statewide health information exchange, which we divided into Secure Routing (27)...

	HIE Building Block	What	From whom	To whom
1	Secure routing to providers	Hospital discharge summary	Hospital	Hospital
2	Secure routing to providers	Key clinical information summary	Hospital	Hospital
3	Secure routing to providers	Request for key clinical information	Hospital	Hospital
4	Secure routing to providers	Hospital discharge summary	Hospital	Other care settings
5	Secure routing to providers	Imaging reports	Hospital	PCP or specialist
6	Secure routing to providers	Lab results	Hospital	PCP or specialist
7	Secure routing to providers	Request for key clinical information	Hospital	PCP or specialist
8	Secure routing to providers	Images	Hospital	PCP or specialist
9	Secure routing to providers	Hospital admission notification	Hospital	Referring Hospital
10	Secure routing to providers	Hospital admission notification	Hospital	Referring physician and/or PCP
11	Secure routing to providers	Hospital discharge summary	Hospital	Referring physician and/or PCP
12	Secure routing to providers	Hospital ED visit summary	Hospital	Referring physician and/or PCP
13	Secure routing to providers	Images	Imaging center	PCP or specialist
14	Secure routing to providers	Imaging reports	Imaging center	PCP or specialist
15	Secure routing to providers	Lab results	National lab	PCP or specialist
16	Secure routing to providers	Referral -- Summary of care record	PCP	Specialist
17	Secure routing to providers	Key clinical information summary	PCP or specialist	Hospital
18	Secure routing to providers	Referral -- Summary of care record	PCP or specialist	Hospital
19	Secure routing to providers	Lab order	PCP or specialist	Hospital
20	Secure routing to providers	Imaging order	PCP or specialist	Imaging center
21	Secure routing to providers	Lab order	PCP or specialist	National lab
22	Secure routing to providers	eRX	PCP or specialist	Pharmacy
23	Secure routing to providers	Medication history	Pharmacy	Hospital
24	Secure routing to providers	Medication history	Pharmacy	PCP or specialist
25	Secure routing to providers	Lab results	Public health lab	Hospital
26	Secure routing to providers	Lab results	Public health lab	PCP or specialist
27	Secure routing to providers	Consult note -- Summary of care record	Specialist	PCP

## ...Expanded Secure Routing (19), and Community Record (6)

	HIE Building Block	What	From whom	To whom
28	Expanded secure routing	Quality measures	Hospital	CMS and/or NH Medicaid
29	Expanded secure routing	Claims submission & eligibility chec	Hospital	Health plan
30	Expanded secure routing	Immunization record	Hospital	Public health
31	Expanded secure routing	Reportable lab results	Hospital	Public health
32	Expanded secure routing	Syndromic surveillance data	Hospital	Public health
33	Expanded secure routing	Reportable conditions	Hospital	Public health
34	Expanded secure routing	Radiation exposure report	Hospital	Radiation exposure registry
35	Expanded secure routing	Radiation exposure report	Imaging center	Radiation exposure registry
36	Expanded secure routing	Laboratory ordering decision support	Payers	PCP or specialist and hospitals
37	Expanded secure routing	Quality measures	PCP or specialist	CMS and/or NH Medicaid
38	Expanded secure routing	Claims submission & eligibility chec	PCP or specialist	Health plan
39	Expanded secure routing	Immunization record	PCP or specialist	Public health
40	Expanded secure routing	Syndromic surveillance data	PCP or specialist	Public health
41	Expanded secure routing	Reportable conditions	PCP or specialist	Public health
42	Expanded secure routing	Public health alerts	Public health	Hospital
43	Expanded secure routing	Public health alerts	Public health	PCP or specialist
44	Expanded secure routing	Discharge instructions	Hospital	Patient
45	Expanded secure routing	General medical summary	PCP or specialist	Patient
46	Expanded secure routing	Post-visit summary	PCP or specialist	Patient

	HIE Building Block	What	From whom	To whom
47	Community record	Public health case investigation info	Hospital	Public health
48	Community record	Community record	Multiple sources	Hospital
49	Community record	Community record	Multiple sources	PCP or specialist
50	Community record	Medication history	Other clinical sources	Hospital
51	Community record	Medication history	Other clinical sources	PCP or specialist
52	Community record	Public health case investigation info	PCP or specialist	Public health



Each of the workgroups began examining the opportunities and constraints of the use cases from their domain perspectives...

### ***Technical Infrastructure***

- No existing collaborative infrastructure to build upon
- Limited funding constrains functionality and forces more work on users
- Legal constraints impose technical design requirements
- Well-developed hospital networks allows focus on aligning with and leveraging existing hubs

### ***Legal-Policy***

- Non-provider exchange such as public health prohibited under current law
- Opt-out requirement introduces complexity to consideration of potentially higher value services

### ***Finance***

- Limited federal funds available, some of which allocated to oversight and reporting
- No public funding available at present for matching or ongoing funding – will require legislative action
- Commercial health plans concentrated but none are NH-focused
- Disparity between larger hospitals with more resources who have already invested, and smaller hospitals with less resources who have not

### ***Business & Technical Operations***

- No existing organization to define, scope, implement, or operate collaborative HIE projects
- Recognition that statewide secure routing is, by itself, of relatively limited apparent value to the larger hospital systems
- Being able to identify and retrieve records from across systems is functionality that should be accelerated to the greatest extent possible

### ***Governance***

- Public accountability: State need for oversight and control of public funds and key policy areas
- Private accountability: Market need for management and operations responsive to private investor goals
- No existing public/private organization to build governance, funding, and operations model – need legislation to create entity

...and we extrapolated from this work to identify 4 working criteria that could be used to set priorities among the use cases

## Use cases

### Secure routing

HIE Building Block	What	From whom	To whom
1 Secure routing to providers	Hospital discharge summary	Hospital	Hospital
2 Secure routing to providers	Key clinical information summary	Hospital	Hospital
3 Secure routing to providers	Request for key clinical information	Hospital	Hospital
4 Secure routing to providers	Hospital discharge summary	Hospital	Other care settings
5 Secure routing to providers	Imaging reports	Hospital	PCP or specialist
6 Secure routing to providers	Lab results	Hospital	PCP or specialist
7 Secure routing to providers	Request for key clinical information	Hospital	PCP or specialist
8 Secure routing to providers	Imaging	Hospital	PCP or specialist
9 Secure routing to providers	Hospital admission notification	Hospital	Referring Hospital
10 Secure routing to providers	Hospital admission notification	Hospital	Referring physician and/or PCP
11 Secure routing to providers	Hospital discharge summary	Hospital	Referring physician and/or PCP
12 Secure routing to providers	Hospital ED visit summary	Hospital	Referring physician and/or PCP
13 Secure routing to providers	Imaging	Imaging center	PCP or specialist
14 Secure routing to providers	Imaging reports	Imaging center	PCP or specialist
15 Secure routing to providers	Lab results	National lab	PCP or specialist
16 Secure routing to providers	Referral - Summary of care record	PCP	Specialist
17 Secure routing to providers	Key clinical information summary	PCP or specialist	Hospital
18 Secure routing to providers	Referral - Summary of care record	PCP or specialist	Hospital
19 Secure routing to providers	Lab order	PCP or specialist	Hospital
20 Secure routing to providers	Imaging order	PCP or specialist	Imaging center
21 Secure routing to providers	Lab order	PCP or specialist	National lab
22 Secure routing to providers	Lab order	PCP or specialist	Pharmacy
23 Secure routing to providers	Medication history	Pharmacy	Hospital
24 Secure routing to providers	Medication history	Pharmacy	PCP or specialist
25 Secure routing to providers	Lab results	Public health lab	Hospital
26 Secure routing to providers	Lab results	Public health lab	PCP or specialist
27 Secure routing to providers	Consult note - Summary of care record	Specialist	PCP

### Expanded secure routing

HIE Building Block	What	From whom	To whom
28 Expanded secure routing	Quality measures	Hospital	CMS and/or NH Medicaid
29 Expanded secure routing	Claims submission & eligibility check	Hospital	Health plan
30 Expanded secure routing	Immunization record	Hospital	Public health
31 Expanded secure routing	Reportable lab results	Hospital	Public health
32 Expanded secure routing	Syndromic surveillance data	Hospital	Public health
33 Expanded secure routing	Reportable conditions	Hospital	Public health
34 Expanded secure routing	Radiation exposure report	Hospital	Radiation exposure registry
35 Expanded secure routing	Radiation exposure report	Imaging center	Radiation exposure registry
36 Expanded secure routing	Laboratory orderline decision support	Pharmacy	PCP or specialist and hospital
37 Expanded secure routing	Quality measures	PCP or specialist	CMS and/or NH Medicaid
38 Expanded secure routing	Claims submission & eligibility check	PCP or specialist	Health plan
39 Expanded secure routing	Immunization record	PCP or specialist	Public health
40 Expanded secure routing	Syndromic surveillance data	PCP or specialist	Public health
41 Expanded secure routing	Reportable conditions	PCP or specialist	Public health
42 Expanded secure routing	Public health alerts	Public health	Hospital
43 Expanded secure routing	Public health alerts	Public health	PCP or specialist
44 Expanded secure routing	Discharge instructions	Hospital	Patient
45 Expanded secure routing	General medical summary	PCP or specialist	Patient
46 Expanded secure routing	Post-visit summary	PCP or specialist	Patient

### Community record

HIE Building Block	What	From whom	To whom
47 Community record	Public health case investigation info	Hospital	Public health
48 Community record	Community record	Multiple sources	Hospital
49 Community record	Community record	Multiple sources	PCP or specialist
50 Community record	Medication history	Other clinical sources	Hospital
51 Community record	Medication history	Other clinical sources	PCP or specialist
52 Community record	Public health case investigation info	PCP or specialist	Public health

## Phasing criteria

### Legality

- Is the use case transaction legal under current NH law?

### Difficulty

- Are there significant business, technical, governance, or legal complexities that need to be resolved before deploying the service/

### Demand for HIE service

- Is there market demand transaction as a statewide HIE service?

### Gap in market today

- Is there a gap in the market today?

## Strawman Phasing

### Phase 1

Can be launched with federal HIE program funds

### Phase 2

No market alternatives exist today but requires change in law and/or mature joint technical and organizational capability

### Phase 3

Technically and/or organizationally complex, and/or low demand for HIE service

## That has led to the following strawman Phasing

ID #	What	From whom	To whom	Phasing	Main reason for Phase categorization
1	Hospital discharge summary	Hospital	Hospital	1	MU and NHHA-consensus priority
2	Key clinical information summary	Hospital	Hospital	1	MU priority
3	Request for key clinical information	Hospital	Hospital	1	Multiple hospital request
5	Imaging reports	Hospital	PCP or specialist	1	Available only in larger hospital systems today
6	Lab results	Hospital	PCP or specialist	1	
7	Request for key clinical information	Hospital	PCP or specialist	1	
9	Hospital admission notification	Hospital	Referring Hospital	1	Continuity of care priority
10	Hospital admission notification	Hospital	Referring physician and/or PCP	1	
11	Hospital discharge summary	Hospital	Referring physician and/or PCP	1	MU and NHHA-consensus priority
12	Hospital ED visit summary	Hospital	Referring physician and/or PCP	1	MU priority
16	Referral -- Summary of care record	PCP	Specialist	1	MU and NHHA-consensus priority
17	Key clinical information summary	PCP or specialist	Hospital	1	MU priority
18	Referral -- Summary of care record	PCP or specialist	Hospital	1	MU and NHHA-consensus priority
27	Consult note -- Summary of care record	Specialist	PCP	1	MU and NHHA-consensus priority

## That has led to the following strawman Phasing

ID #	What	From whom	To whom	Phasing	Main reason for Phase categorization
4	Hospital discharge summary	Hospital	Other care settings	2	Technical requirements of other care settings unknown
19	Lab order	PCP or specialist	Hospital	2	Requires workflow change planning with labs
25	Lab results	Public health lab	Hospital	2	Low demand
26	Lab results	Public health lab	PCP or specialist	2	
30	Immunization record	Hospital	Public health	2	Restricted by law
31	Reportable lab results	Hospital	Public health	2	
32	Syndromic surveillance data	Hospital	Public health	2	
33	Reportable conditions	Hospital	Public health	2	
36	Laboratory ordering decision support	Payers	PCP or specialist and hospitals	2	
39	Immunization record	PCP or specialist	Public health	2	
40	Syndromic surveillance data	PCP or specialist	Public health	2	
41	Reportable conditions	PCP or specialist	Public health	2	
48	Community record	Multiple sources	Hospital	2	Technically, organizationally, and legally complex; requires funding outside of HIE grant
49	Community record	Multiple sources	PCP or specialist	2	
50	Medication history	Other clinical sources	Hospital	2	
51	Medication history	Other clinical sources	PCP or specialist	2	

## That has led to the following strawman Phasing

ID #	What	From whom	To whom	Phasing	Main reason for Phase categorization
8	Images	Hospital	PCP or specialist	3	Technically and organizationally complex; PACs view capability
13	Images	Imaging center	PCP or specialist	3	
14	Imaging reports	Imaging center	PCP or specialist	3	Relatively low demand for non-hospital centers; technical capabilities of imaging centers unknown
15	Lab results	National lab	PCP or specialist	3	Already widely available in market
20	Imaging order	PCP or specialist	Imaging center	3	Relatively low demand for non-hospital centers; technical capabilities of imaging centers unknown
21	Lab order	PCP or specialist	National lab	3	Already widely available in market
22	eRX	PCP or specialist	Pharmacy	3	
23	Medication history	Pharmacy	Hospital	3	
24	Medication history	Pharmacy	PCP or specialist	3	
28	Quality measures	Hospital	CMS and/or NH Medicaid	3	Restricted by law; technically and organizationally complex
29	Claims submission & eligibility check	Hospital	Health plan	3	
34	Radiation exposure report	Hospital	Radiation exposure registry	3	
35	Radiation exposure report	Imaging center	Radiation exposure registry	3	
37	Quality measures	PCP or specialist	CMS and/or NH Medicaid	3	
38	Claims submission & eligibility check	PCP or specialist	Health plan	3	
42	Public health alerts	Public health	Hospital	3	
43	Public health alerts	Public health	PCP or specialist	3	Restricted by law; low demand as an HIE service
44	Discharge instructions	Hospital	Patient	3	
45	General medical summary	PCP or specialist	Patient	3	
46	Post-visit summary	PCP or specialist	Patient	3	Restricted by law; technically and organizationally complex
47	Public health case investigation info	Hospital	Public health	3	
52	Public health case investigation info	PCP or specialist	Public health	3	

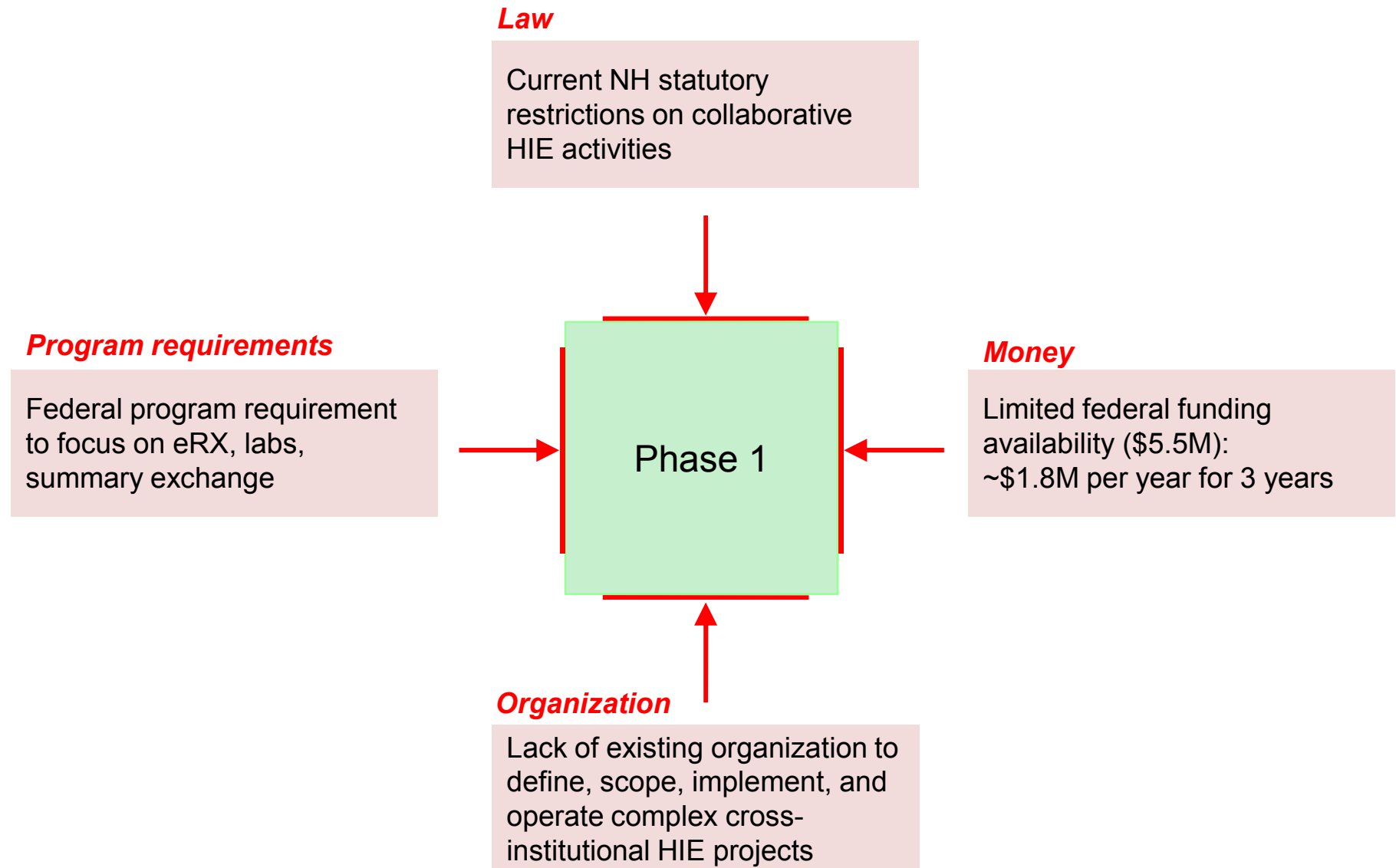
## Phasing exactly aligned with NHHA-consensus priorities except where lack of organization and/or funding prevents earlier implementation

ID #	What	From whom	To whom	Phasing	NHHA consensus process
1	Hospital discharge summary	Hospital	Hospital	1	High
6	Lab results	Hospital	PCP or specialist	1	High
11	Hospital discharge summary	Hospital	Referring physician and/or PCP	1	High
16	Referral -- Summary of care record	PCP	Specialist	1	Stretch
18	Referral -- Summary of care record	PCP or specialist	Hospital	1	Stretch
27	Consult note -- Summary of care record	Specialist	PCP	1	Stretch
4	Hospital discharge summary	Hospital	Other care settings	2	High
30	Immunization record	Hospital	Public health	2	Low
31	Reportable lab results	Hospital	Public health	2	Low
32	Syndromic surveillance data	Hospital	Public health	2	Low
33	Reportable conditions	Hospital	Public health	2	Low
39	Immunization record	PCP or specialist	Public health	2	Low
40	Syndromic surveillance data	PCP or specialist	Public health	2	Low
41	Reportable conditions	PCP or specialist	Public health	2	Low
48	Community record	Multiple sources	Hospital	2	High
49	Community record	Multiple sources	PCP or specialist	2	High
8	Images	Hospital	PCP or specialist	3	Low
13	Images	Imaging center	PCP or specialist	3	Low
45	General medical summary	PCP or specialist	Patient	3	Low

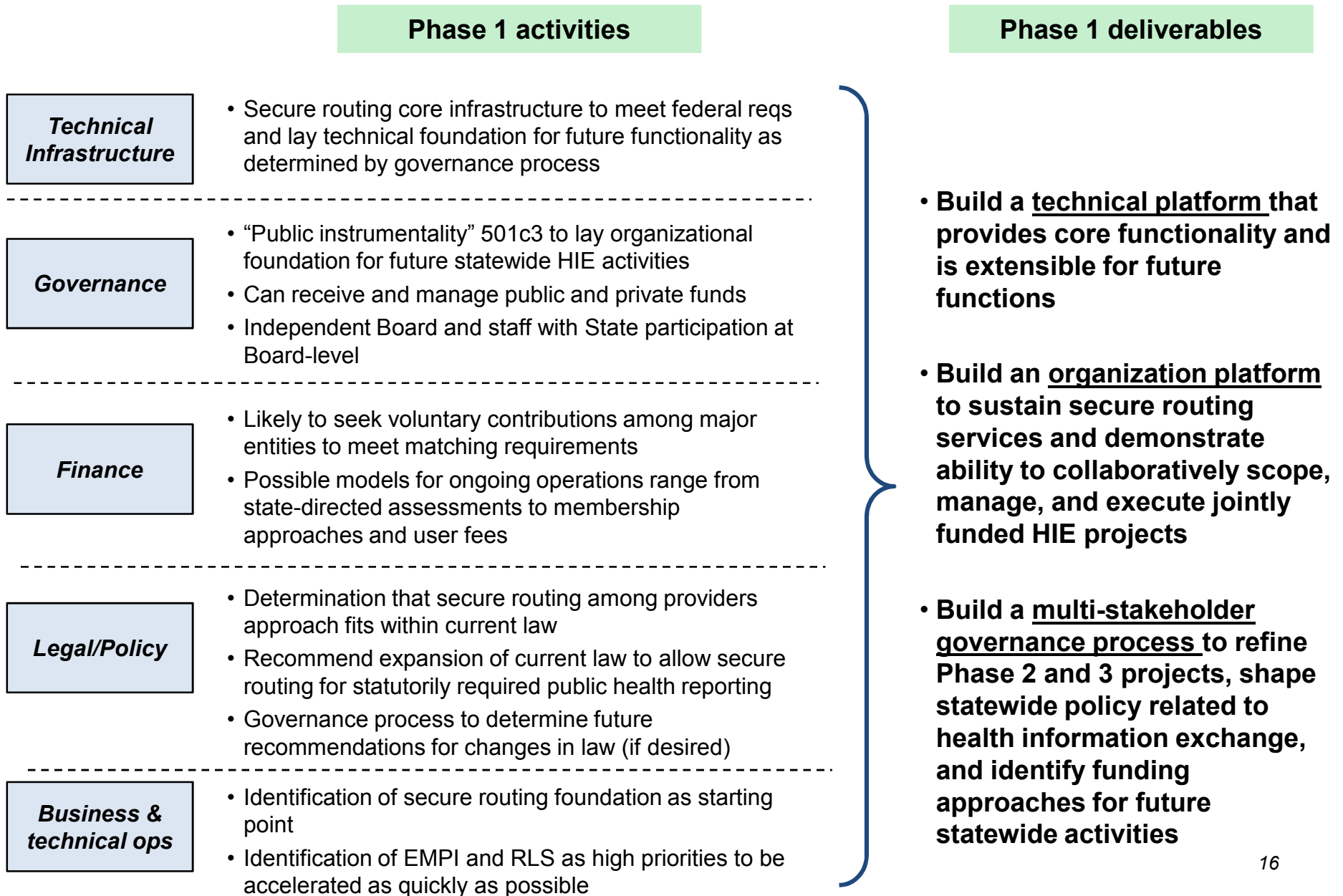
Technical capabilities of other care settings unknown at present

Technically, operationally, and legally complex; requires funding outside of HIE grant

## Specific constraints severely limit what can be done in Phase 1: Law, Program requirements, Organization, and Money



## Focus of Phase 1 is to build a durable foundation for future value creation





## Next steps for working groups

### **Technical Infrastructure**

- Further specify Phase 1 infrastructure details
- Provide cost estimates for implementation and operation of Phase 1 infrastructure
- Create project plan for infrastructure build and roll-out

### **Governance**

- Finalize recommendation for “public instrumentality”
- Decide and finalize transition governance approach to guide Phase 1 investments prior to launch of NewCo
- Create project plan for transition governance and creation of public instrumentality

### **Finance**

- Finalize recommendations and approach for matching fund identification
- Identify funding issues to support public instrumentality
- Recommend funding approaches for ongoing activities
- Identify opportunities for leveraging Medicaid, public health, and Medicaid funding

### **Legal/Policy**

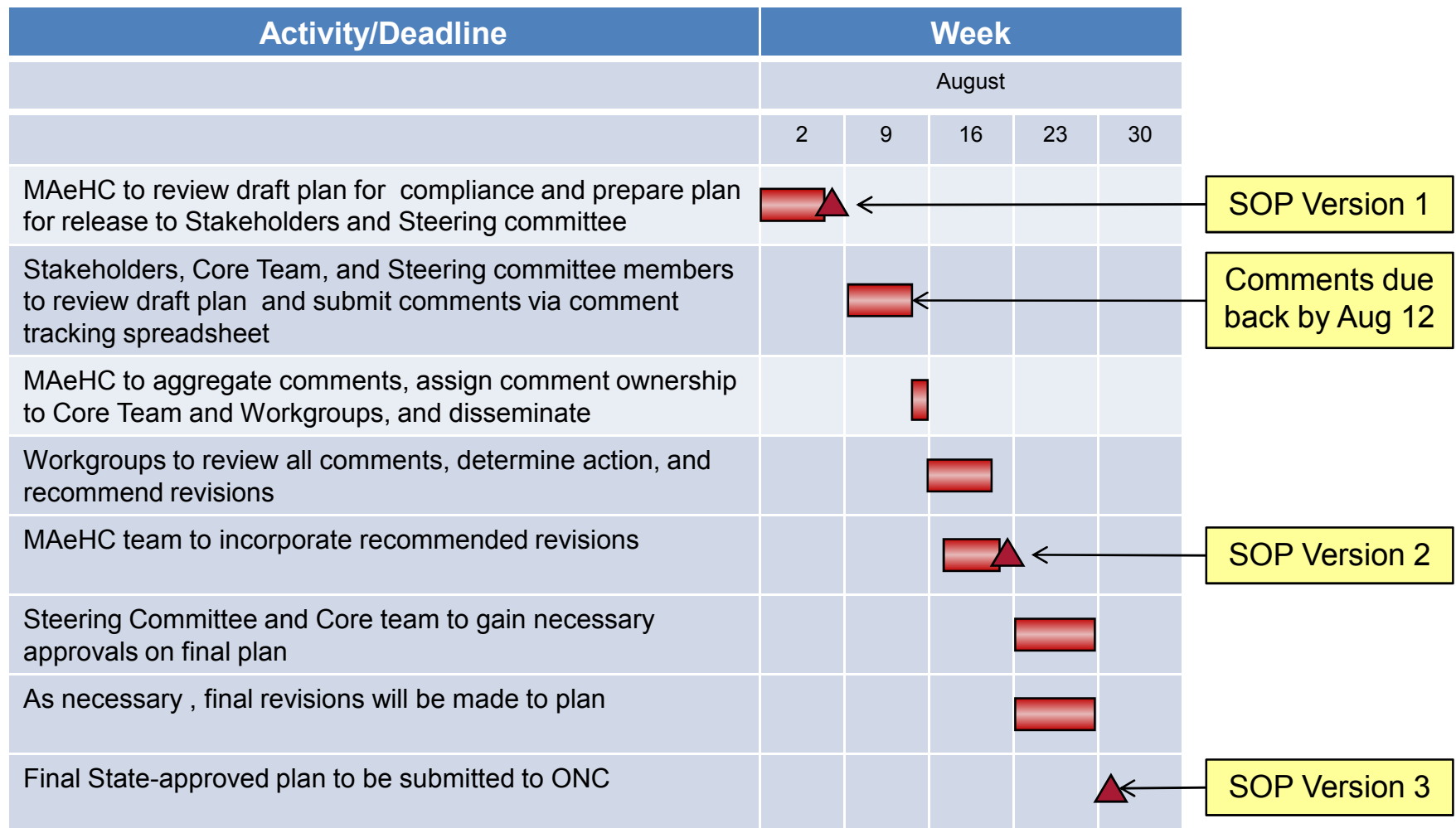
- Finalize legal/policy recommendations related to Phase 1
- Identify legal/policy issues related to EMPI and RLS services
- Develop recommendations for changes in law to support extensions necessary to cover Phase 2 and 3 activities

### **Business & technical ops**

- Confirm use case phasing
- Identify approaches for accelerating Phase 2 priority projects (EMPI and RLS)


## Looking ahead to the review and finalization of the plan

### Segment 1 Timeline: June 1 – October 31




# Comment tracking spreadsheet


Section	Page	Paragraph	Comment	Assigned to:	Recommended Action	Action Taken




E.g.,  
“Recommend that we consider...”



E.g.,  
“Core Team”



E.g.,  
“Accept revision”



E.g.,  
“Revision incorporated”

## Wrap up and next steps

- ❑ Feedback review session to be scheduled for between Aug 16 and 18
- ❑ Meeting summary to be distributed to all workgroups

***Thanks for all your hard  
work through the Summer!!***